



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,171	03/10/2004	David W. Tipton	31007/32003	4040
4743 7590 05/24/2007 MARSHALL, GERSTEIN & BORUN LLP 233 S. WACKER DRIVE, SUITE 6300 SEARS TOWER CHICAGO, IL 60606			EXAMINER BUMGARNER, MELBA N	
			ART UNIT 3732	PAPER NUMBER
			MAIL DATE 05/24/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/797,171

Applicant(s)

TIPTON ET AL.

Examiner

Melba Bumgarner

Art Unit

3732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-24 and 26-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7-24 and 26-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/6/07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5, 7, 9, 10, 12, 13, 21-24, 26, 27, 31-34, 36, 38, 39, 42, and 44 are rejected under 35 U.S.C. 102(e) as being anticipated by Copeland (6,494,714). Copeland discloses an ultrasonic insert comprising an elongated body 15 having first and second body ends and central axis; a treatment applying tip region carried by the first end, the region having a tip end displaced from the first end; a transducer coupled to the second end; an internal fluid flow channel 45 formed at least in part in the body, extending at an angle to the central axis and having first and second fluid flow ends, one flow end located on the body with the other flow end located in the tip region; and a transverse channel formed in the body adjacent to the one flow end and intersects the flow channel (figure 1). The other flow end is located on the tip region and comprises an elongated opening. The insert includes a magnetostrictive transducer 14 coupled to the second end. The transverse channel intersects an external periphery of the body and is off-set from the one flow end. The transverse channel 42 has a width and depth and is capable of establishing a fluid flow rate. The channel has a width of .014 inch. The other flow end comprises a spray controlling indentation formed in the exterior surface of the tip region as seen

in figure 3. The insert carries a rotary bearing 16. Copeland discloses a dental treatment applying apparatus comprising a handle 12 that carries an ultrasonic transducer, a vibrating treatment applying tip portion 20 coupled to the transducer, an internal flow channel formed in a portion, the channel having first and second sections that intersect to form a fluid inlet into the channel of a size (0.014 inch diameter) that is capable of the intended fluid flow rate (figure 1). The sections are substantially perpendicular to one another. One section terminates at a fluid flow output port in the tip portion. The body and transducer are removable from the handle, an elongated body member 15 between the transducer and the tip portion. One section extends from the tip portion to the body member with the second section intersecting the first section in the body member. Copeland discloses an ultrasonic insert comprising a body portion, tip section adjacent one of the ends, a transducer coupled to the other end, an internal fluid flow channel with a transverse (lateral) slot formed in the body, the channel terminating at a fluid flow output on the tip section.

3. Claims 1-5, 7, 21-24, 26, 27, and 31-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Banko (3,930,173). Banko discloses an ultrasonic insert comprising an elongated body 14 having first and second body ends and central axis; a treatment applying tip region 12 carried by the first end, the region having a tip end displaced from the first end; a transducer T coupled to the second end; an internal fluid flow channel 23 formed at least in part in the body, extending at an angle to the central axis and having first and second fluid flow ends, one flow end located on the body and the other flow end located in the tip region, closer to the tip end than the one flow end; and a transverse channel 24 formed in the body adjacent to the one flow end and intersects the flow channel (for example, figure 1A). The other flow end is located on the tip

Art Unit: 3732

region between the first body end and the tip end, and comprises an elongated opening. The insert includes a magnetostrictive transducer 10 coupled to the second end. The transverse channel intersects an external periphery of the body and is off-set from the one flow end. The transverse channel has a width and depth and is capable of establishing a fluid flow rate. Banko discloses a dental treatment applying apparatus comprising a handle 40 that carries an ultrasonic transducer, an elongated main body 14 having a vibrating treatment applying tip portion 12 coupled to the transducer, an internal flow channel formed in a portion of the body, the channel having first and second sections that intersect to form a fluid inlet into the channel of a size to provide a flow rate that is capable of the intended fluid flow rate. The sections are substantially perpendicular to one another. One section terminates at a fluid flow output port in the tip portion. The body and transducer are removable from the handle. One section extends from the tip portion of the body member with the second section intersecting the first section in the body member. Banko discloses an ultrasonic insert comprising a body portion, tip section adjacent one of the ends, a transducer coupled to the other end, an internal fluid flow channel with a transverse slot formed in the body, the channel terminating at a fluid flow output on the tip section.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8, 37, 40, 41, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Copeland. Copeland discloses an insert that shows the limitations as described above; however, Copeland does not show a range of depth parameter of the transverse channel. It would have been obvious to one of ordinary skill in the art as to the specific range of the depth parameter in that Copeland shows the depth that is of the same order of magnitude as the width parameter. It would have been an obvious matter of choice to one of ordinary skill in the art at the time the invention was made as to the pressure of the fluid intended to be used with the insert.

6. Claims 11, 30, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Copeland or Banko in view of Balamuth et al. (3,075,288). Copeland or Banko discloses an insert that shows the limitations as described above; however, they do not show a flow shut off valve. Balamuth et al. teach an ultrasonic insert comprising a flow shut off valve. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the insert to comprise the valve of Balamuth et al. in order to control the flow of fluid through the passageway.

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Banko in view of Rahman et al. (2002/0040198). Banko discloses an insert that shows the limitations as described above and a handle of plastic. Rahman et al. teach an elastomeric handle. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Banko to have elastomeric handle in order to comfortably interface with user's fingers in view of Rahman et al.

8. Claims 14-18, 28, 29, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Copeland in view of Rahman et al. Copeland discloses an insert that shows the limitations as described above; however, Copeland does not show an elastomeric handle. Rahman et al. teach an elastomeric handle. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Banko to have elastomeric handle in order to comfortable interface with user's fingers in view of Rahman et al. Copeland does not show the bearing having first and second bearing parts. Rahman et al. teach an ultrasonic insert comprising first and second bearing parts rotatable relative to one another, the handle and tip region are rotatable together relative to one of the bearing parts. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the insert to comprise the bearing of Rahman et al. in order to effect rotation by applying force only to the insert.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in

accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

9. Claims 19 and 20 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Copeland in view of Rahman et al. and further in view of Balamuth et al. The modified insert shows the limitations as described above; however, they do not show a fluid shut off. Balamuth et al. teach an ultrasonic insert comprising a flow shut off. It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the insert to comprise the flow shut off of Balamuth et al. in order to control the flow of fluid through the passageway.

Response to Arguments

10. Applicant's arguments filed March 6, 2007 with respect to rejections over Hellenkamp have been fully considered and are persuasive. Applicant's arguments with respect to rejections over Copeland have been fully considered but they are not persuasive. The claimed structural limitations are shown in the Copeland. The claims state that the internal flow channel extends at an angle to the central axis, but does not indicate at what angle. Copeland also shows the location of the transverse channel as claimed. The claim limitations are interpreted broadly in that there are no precise locations when described as being in, on, between, closer to, extends to, etc. with respect to first and second ends of the body, a tip end of the tip region, first and second fluid flow ends, also defined as one flow end and other flow end, and first and second sections of the channel. Copeland shows an integrally formed "tip section", the claim reads "an integrally formed tip section, the tip section is carried by the body portion adjacent to one of the ends."

The argument of Applicant as to no discontinuity between the main body portion and the tip section is not claimed and is not an interpretation of integrally formed tip section.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melba Bumgarner whose telephone number is 571-272-4709. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached at 571-272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3732

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, reading "Melba Bumgarner". The signature is written in a cursive, flowing style.

Melba Bumgarner
Primary Examiner